

Title (en)
ROBOT WITH MICRO PROCESSOR-BASED DIGITAL ROBOT CONTROL

Publication
EP 0269372 A3 19880817 (EN)

Application
EP 87310242 A 19871119

Priority
• US 93285386 A 19861120
• US 93297686 A 19861120
• US 93297786 A 19861120
• US 93299086 A 19861120

Abstract (en)
[origin: EP0269372A2] A digital robot control [Figures 3 and 5] is provided with cascaded position/velocity [Figure 10] and torque [Figure 6] control loops with microprocessor servo controllers in each. Each servo controller includes two microprocessors (202, 204) that operate as a servo engine in providing motion control for six robot axes [Figure 1, 21-26]. One microprocessor (202) is structured to perform data processing and coordination tasks. The other one (204) performs calculation tasks and operates as a slave processor to the first. Also included as part of the robot control is a digital position and velocity feedback system [Figure 13, 810, 812] for multiaxis robot control which employs a circuit [Figure 14, 813] to process robot motor encoder incremental position signals for position change and velocity computations. At low speeds, velocity is computed [Figure 17, 848] from the reciprocal of elapsed time. At higher speeds, velocity is computed (850) from the rate at which incremental position signals are generated.

IPC 1-7
B25J 9/18

IPC 8 full level
B25J 9/18 (2006.01); **G05B 19/414** (2006.01)

CPC (source: EP)
G05B 19/4141 (2013.01); **G05B 2219/33337** (2013.01); **G05B 2219/42256** (2013.01)

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Designated contracting state (EPC)
DE FR GB IT SE

DOCDB simple family (publication)
EP 0269372 A2 19880601; EP 0269372 A3 19880817

DOCDB simple family (application)
EP 87310242 A 19871119